



Lower Kootenai Geographic Area

The Lower Kootenai Geographic Area (GA) lies predominantly within Boundary County in Idaho, with small portions in Bonner County, Idaho and Lincoln County, Montana and is adjacent to British Columbia. Of these 659,000 acres, 409,000 acres (62%) are administered by the Idaho Panhandle National Forests (IPNFs). This area has had a historic reliance on logging, producing a strong connection with the wood products industry.

Unique Features within this GA include:

- Extensive Grizzly Bear and Caribou Habitat
- Copper and Snow Falls
- Snyder Guard Station and Rental Cabin
- Many high elevation mountain lakes
- Shorty Peak Lookout – rental
- Roman Nose Lakes

Recreation use in this area is varied but less than other GAs on the IPNFs. Hunting, fishing, and hiking are popular activities. Rafting use on the Moyie River is common. Mostly accessed by foot, the Selkirk Crest is another popular destination within this GA. Current road and trail access for this area is portrayed on the 2003 Visitor/Travel Plan Map for the Bonners Ferry Ranger District.

On lands administered by the IPNFs, the dominant vegetation is mixed conifer, mostly Douglas-fir, larch and lodgepole at low/mid elevations and spruce, subalpine fir and lodgepole at higher elevations. The Selkirk Mountains contain whitebark pine, which is declining due to a combination of diseases, insect infestations and fire suppression. Since 1980, approximately 5% of the National Forest land in this GA has been harvested to regenerate trees and is currently under management as plantations or naturally regenerated stands, with small to medium size trees. A large concentration of small to medium sized trees also exists as a result of the 1967 Trapper Peak/Sundance burn. An additional 6% has been partially cut, leaving a portion of the trees, mostly medium to large in size. Currently 16% is old growth forests, or very near old growth conditions (potential old growth), where large, old trees are a significant component of the forest.

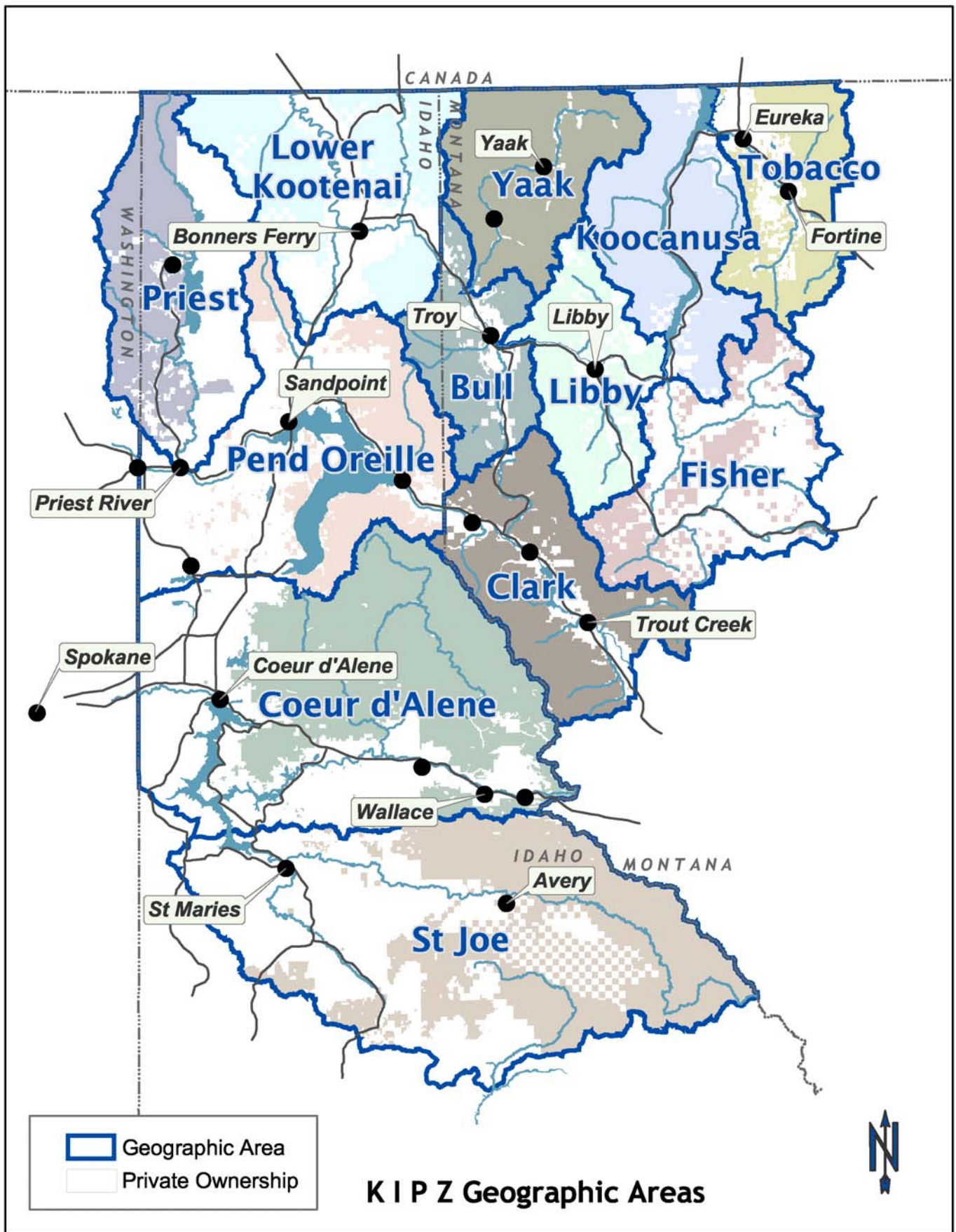
Vast areas were burned in wildfires between the late 1800's and early 1930's. Since the advent of modern fire suppression in the 1930's, only the large 1967 fires provided disturbances consistent with historic scales.

This GA includes the Lower Kootenai River where it flows into Idaho from Montana on the east, to the international border with Canada. Water quality is generally good in the western tributary watersheds to the Kootenai River. These watersheds support high valued fisheries, although upstream flow regulation in Montana controls the mainstem Kootenai River, altering the native wetlands and aquatic habitats. The tributaries to the Moyie River and to Deep Creek are generally in poorer condition, with fisheries of a lesser potential and with a complex ownership pattern. Restoration needs are extensive, but the priority is lower than other areas. There are currently about six water bodies in the GA that are listed as "impaired" by the State under section 303(d).

Bull trout and other native salmonids have historically occupied most of the waters of the area; however, their numbers and range have been limited for many reasons including watershed conditions that affect water quality, loss or degradation of habitat, and competition from introduced fish species. Bull trout populations are small and scattered. Most streams have steep mouths that prevent fish from migrating from the main Kootenai River into the tributaries. The Kootenai River contains a listed sturgeon species and interior redband trout (native rainbow) are found in some streams.

The Lower Kootenai GA contain populations of, or habitat for, all big game species including mountain goat, and threatened and endangered species; gray wolf, caribou, grizzly bear and lynx. The GA contains most of the region's carnivore species including fisher and wolverine. Townsend's big-eared bat, northern bog-lemming, western toad and common loon are a few of the sensitive species, which occur here.

This area contains all or portions of eleven Inventoried Roadless Areas totaling approximately 151,000 acres or 37% of National Forest System lands in this GA. The Proposed Selkirk Crest Wilderness Area is located here, along with three Research Natural Areas: Hunt Girl Creek, Three Ponds, and Smith Creek.



Geographic Area Maps

The following maps provide some of the important information that will be considered in the development of management direction across the Geographic Area (GA) and the Forest. There are currently seven different maps available for each GA and the information on the maps has been combined as follows:

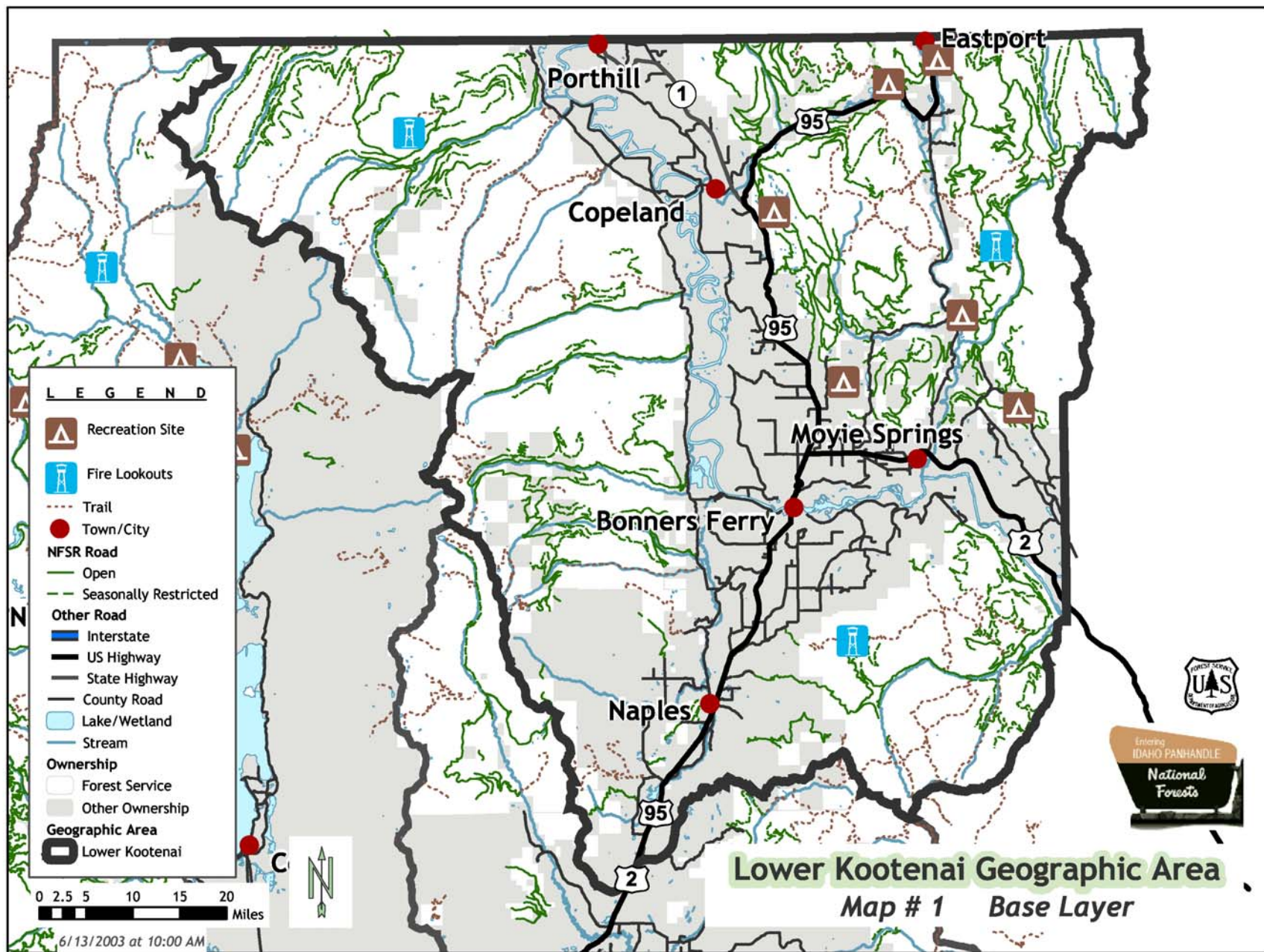
| Map # | Title of Map | What information is on that map |
|--------------|---|---|
| #1 | Base Layer | Forest Access and Recreation |
| #2 | Wildlife | Bear Management Units, Lynx Analysis Units, and Caribou Management Units |
| #3 | Special Designations | Inventoried Roadless Areas, Special Interest Areas, Research Natural Areas, Proposed Wilderness, and Wild and Scenic Rivers |
| #4 | Watershed | Watershed condition and 303d streams |
| #5 | Fish | TE&S watersheds by species (bull trout, westslope cutthroat trout, interior redband trout) |
| #6 | Vegetation | Habitat type groups and old growth |
| #7 | Timber, Wildfire, and Human Populations | Timber harvest, wildfire, human population density |

Additional maps will be developed as data and information becomes available for the 12 geographic areas within the Kootenai and Idaho Panhandle Forest Plan Revision Zone (KIPZ).

Following are each of the maps for this GA and a short description of some of the more important information depicted on the maps:

MAP DISCLAIMER

The map products are reproduced from geospatial information prepared by the U.S. Department of Agriculture Forest Service. GIS data and product accuracy may vary. They may be: developed from sources of differing accuracy, accurate only at certain scales, based on modeling or interpretation, incomplete while being created or revised, etc. Using GIS products for purposes other than those for which they were created may yield inaccurate or misleading results. The Forest Service reserves the right to correct, update, modify, or replace GIS products without notification. For more information, contact the Kootenai or Idaho Panhandle National Forests Supervisor's Office.



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| <p style="text-align: center;"><u>Map #1 (Base Layer)</u> Forest Recreation and Access</p> |
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This map layer includes forest boundaries, cities, towns, highways, major rivers, streams and water bodies, ownership, wilderness, mountain tops, developed recreation sites, and travel routes (includes roads and trails).

Access and Recreation

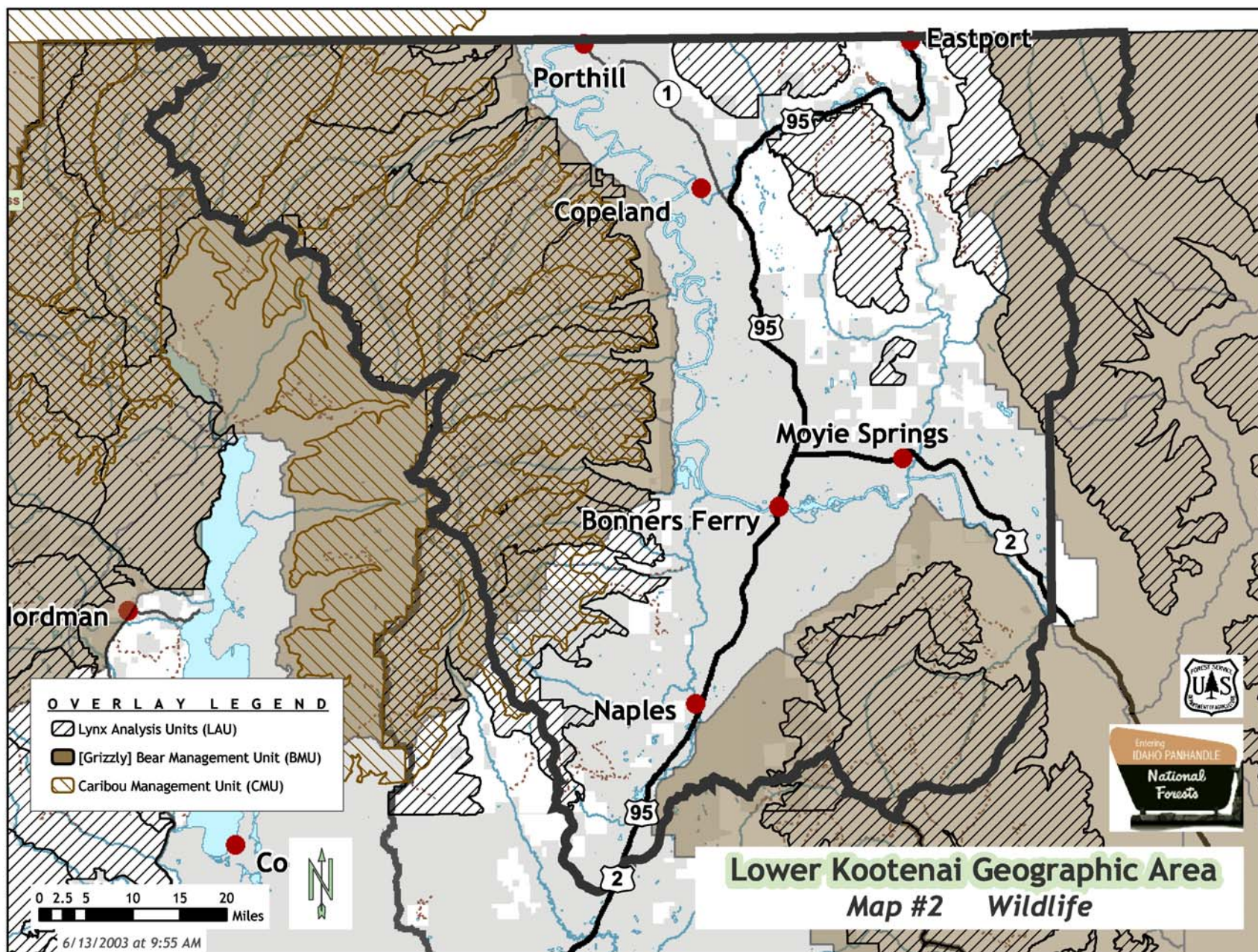
Much of the information regarding recreation and access is present on map #1. This map contains the location of developed sites and trails. It also contains information on access, showing open and seasonally restricted roads. Many opportunities for different types of recreation come from the information on this base map.

The Forest Plan Revision process is programmatic in nature and will not analyze individual routes (trails or roads), nor will it make decisions about the types of uses allowed on those routes. The revised Forest Plan will make changes to the Management Area allocations, thereby modifying the type of uses allowed within the Management Areas.

On the KNF, the Northern Region Off-Highway Vehicle (OHV) EIS and Plan Amendment prohibits motorized, wheeled, cross-country travel with some exceptions such as emergency situations or extractions. The 1987 IPNF Forest Plan was not included in this analysis and Forest Plan amendment. Limited wheeled, cross-country travel is currently permitted on the IPNF. This will be addressed in this Revision effort.

Generally, developed recreation sites meet public expectations and these sites are on this map.

Winter recreation – Under development ... This map layer will include the trails and areas identified for snowmobiling and cross-country skiing.



Map #2

Wildlife

This map layer includes the Bear Management Units, Lynx Analysis Units, and Caribou Management Units. The Big Game Winter Range map layer is still under development.

Bear Management Units (BMUs)

BMUs are areas established for use in grizzly bear analysis. BMUs generally (a) approximate female home range size; and (b) include representations of all available habitat components. Management requirements within and outside of BMUs have been defined to meet recovery goals for the grizzly bear. Guidelines from the grizzly bear recovery plan, the grizzly bear access amendment, and the Interagency Grizzly Bear Committee (IGBC) are as follows:

Within recovery zone (BMUs):

- No net increase in open motorized route density (OMRD) or total motorized route density (TMRD) on Forest lands within BMUs. Some BMUs require a reduction in TMRD (see recovery goals).
- No net loss of core acreage on federal ownership in all BMUs, follow criteria for core established to replace lost existing core, strive to achieve 55% core in Priority 1 BMUs. (Core area is defined as an area of secure habitat within a BMU that contains no motorized travel routes or high use nonmotorized trails during the non-denning season and is more than 0.3 miles from a drivable road.)
- No reduction in habitat effectiveness below standard. (Habitat effectiveness is defined as a measure of habitat security within a BMU calculated by establishing buffers around open roads and other activities. The width of the buffer depends on the type of activity, but is ¼ mile for most activities. The goal is to maintain at least 70% of each BMU as effective habitat during the active bear year on the KNF and 70 square miles of effective habitat on the IPNFs.)
- Activities will be conducted outside denning and spring bear use periods.

Bears outside the recovery zone (potential management strategies may include):

- No net increase in linear open road densities during periods of activity.
- Reduce potential impacts related to grazing and sanitation.

Lynx Analysis Units (LAUs)

LAUs are areas established for use in lynx analysis. LAUs approximate the size of a female's annual home range and encompass all seasonal habitats. LAUs also contain areas of non-lynx habitat, such as lower elevation drier sites, especially in mountainous regions. Generally, lynx conservation measures apply only to lynx habitat within LAUs, although considerations related to connectivity may be appropriate for other areas. An LAU is an area of at least the size used by an individual lynx, from about 25 to 50 mi². Management requirements from the Lynx Conservation Assessment Strategy (LCAS) within LAUs are as follows:

- Maintain habitat connectivity between LAUs.
- Unless a broad-scale assessment indicates otherwise, for LAUs where more than 30% of lynx habitat is currently unsuitable, no further reduction of suitable conditions shall occur

as a result of vegetation management projects. (Prescribed fire activities designed to restore ecological processes and maintain or improve lynx habitat are not limited.)

- Timber management practices, such as timber harvest and salvage sales, should not change more than 15% of lynx habitat within a LAU to an unsuitable condition within a 10-year period.
- Maintain denning habitat within a LAU in patches generally larger than 5 acres, comprising at least 10% of the lynx habitat.
- Where less than 10% denning habitat is present within a LAU, defer management actions that alter vegetation in stands that have the highest potential for developing denning-habitat structure in the future.
- Allow no net increase in groomed or designated over-the-snow routes, by LAU, unless the grooming or designation serves to consolidate use and improve lynx habitat. This does not apply within permitted ski area boundaries, to winter logging, or access to private inholdings.
- Restrict motorized winter access for non-recreation special uses, timber sales and mineral and energy exploration-and-development sites and facilities to designated routes.

Caribou Management Units (CMUs)

CMUs range in size from 17,000 to over 60,000 acres and include representations of all available habitat components. Management requirements within CMUs have been defined to meet recovery goals for the woodland caribou. Existing guidelines emphasize five distinct seasonal habitats in managing caribou habitat across the landscape; early winter, late winter, spring, calving, and summer habitats. Management requirements to implement recommendations of the caribou steering committee and recovery team and meet conditions of the Caribou Recovery Plan are as follows:

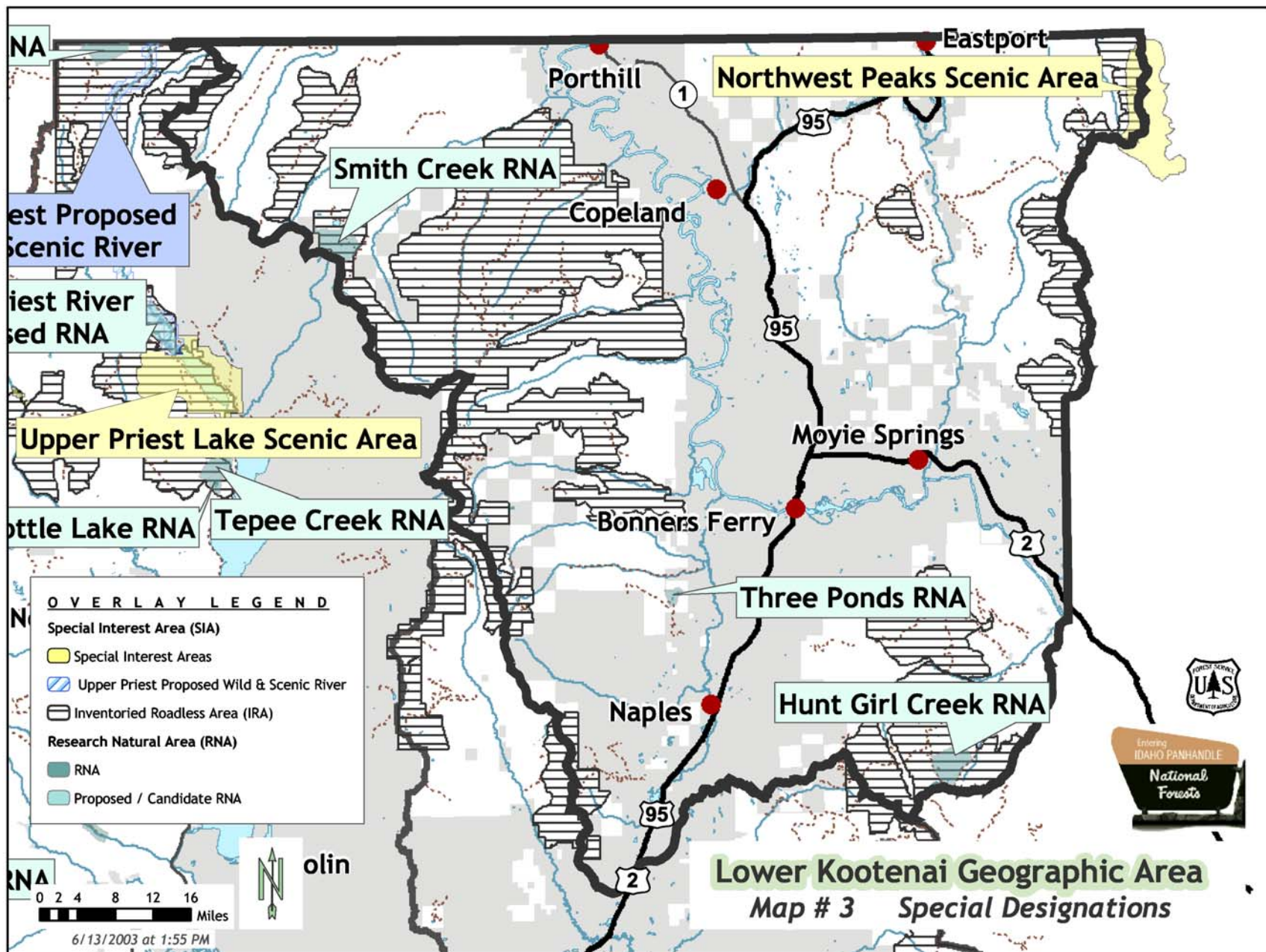
- Maintain seasonal habitat integrity in accordance with the Caribou Recovery Plan. The forest plan defined target conditions for each of the five seasonal caribou habitats. These conditions reflect habitat components for over-story (species composition), age, canopy closure, tree size, and under-story (in relation to food availability).
- Summer habitats - A minimum of 25 percent of the sub-alpine fir habitat type series will be maintained in target stand condition at all times.
- Late winter/calving – Sub-alpine fir and high elevation habitat type series are used as calving during June and mid-July. Disturbance will be restricted during this time period.
- Spring – 40 percent of the cedar/hemlock zone in caribou habitat will be managed as spring range, with priority given to south and west aspects.
- Early winter – maintain at least 60 percent of the cedar/hemlock zone in old growth cedar/hemlock cover types.
- A fire risk assessment is being completed on the IPNFs, which will make recommendations to protect key caribou habitats.
- Reduce or eliminate the impacts of recreational activity on caribou and their habitat and develop standards pertaining to recreational activity in caribou habitat.

Big Game Winter Range

Under development...This map layer will include information on the following: White-tailed deer, mule deer, elk, moose, caribou, and to a lesser extent bighorn sheep are the principal big game species affiliated with winter range assessments. There are three primary elements to consider in managing winter range. They are thermal cover, human disturbance, and forage quality and quantity.

Thermal cover is a coniferous stand of trees 40 feet tall or taller with average crown closure of 70 percent or more. During periods of extreme snow accumulations (winter of 1996/1997) areas that provide dense crown closure are used because of snow interception that reduces snow depth on the ground. Forage quality and quantity includes the amount of available forage, the spatial arrangement of the cover and forage blocks and block size. The interaction of cover and forage may be the criteria for habitat selection. Potential management strategies may include:

- Maintaining a minimum of 60 percent cover. Favor thermal cover (no less than 40 percent) with the remaining 20 percent in thermal or hiding cover.
- Minimizing open motorized access on winter range, during the key winter use period (December 1 to April 30).
- Providing a minimum corridor width of 600 feet between forage areas. Forage areas should not exceed a maximum of 20 acres in size and no portion should be more than 600 feet from cover.
- A restoration strategy for the dry forest habitat types that are most often found on winter range. This could include thinning from below and/or underburning.



Map #3

Special Designations

This map layer includes Inventoried Roadless Areas (IRAs), Research Natural Areas (RNAs), Special Interest Areas (SIAs) and Wild, Scenic and Recreational Rivers (WSR) from the 1987 Forest Plans, as amended. “Proposed” wilderness is not included on this map layer as it will be included in the inventoried roadless area evaluation process that will be addressed in the revision process. Management considerations for each type of special management area are as follows:

Inventoried Roadless Areas (IRAs)

IRAs are defined as undeveloped areas typically exceeding 5,000 acres that met the minimum criteria for wilderness consideration under the Wilderness Act and were inventoried during the Forest Service’s Roadless Area Review and Evaluation (RARE II) process, subsequent assessments, or forest planning. These areas are identified in a set of inventoried roadless area maps, contained in the *Forest Service Roadless Area Conservation Rule, Final Environmental Impact Statement, Volume 2*, dated November, 2000.

The KNF IRAs are those that were included in the Roadless Area Conservation Rule. The KNF inventory was completed from 1994 – 1999. Because of a short turn-around time, the IPNFs IRAs in the Roadless Area Conservation Rule do not show all NEPA projects since 1987 that caused a reduction in IRA acreages. The IPNFs IRAs were re-inventoried in 2001 – 2002 to reflect these changes.

Under the Forest Service Roadless Area Conservation Rule, activities that would negatively affect roadless values are prohibited. The Roadless Rule:

- Prohibits new road construction and reconstruction in IRAs on NFS lands, except:
 - ♦ To protect health and safety in cases of imminent threat of flood, fire, or other catastrophic event that, without intervention, would cause the loss of life or property.
 - ♦ To conduct environmental clean up required by federal law.
 - ♦ To allow for reserved or outstanding rights provided for by statute or treaty.
 - ♦ To prevent irreparable resource damage by an existing road.
 - ♦ To rectify existing hazardous road conditions.
 - ♦ Where a road is part of a Federal Aid Highway project.
 - ♦ Where a road is needed in conjunction with the continuation, extension, or renewal of a mineral lease on lands that are under lease, or for new leases issued immediately upon expiration of an existing lease.

- Prohibits cutting, selling, or removing timber except:
 - ♦ For the cutting, selling, or removal of generally small diameter trees which maintains or improves roadless characteristics and:
 - To improve habitat for threatened, endangered, proposed, or sensitive species, or
 - To maintain or restore ecosystem composition and structure, such as reducing the risk of uncharacteristic wildfire effects.
 - ♦ When incidental to the accomplishment of a management activity not otherwise prohibited by this rule.
 - ♦ For personal or administrative use.

Research Natural Areas

- These areas are dedicated to non-manipulative research, observation, and study.
- Timber harvest is not allowed.
- Areas are withdrawn from mineral development.
- No Surface Occupancy stipulation for oil & gas leases.
- New road construction is not allowed.
- Wildfire will usually be suppressed within these areas.

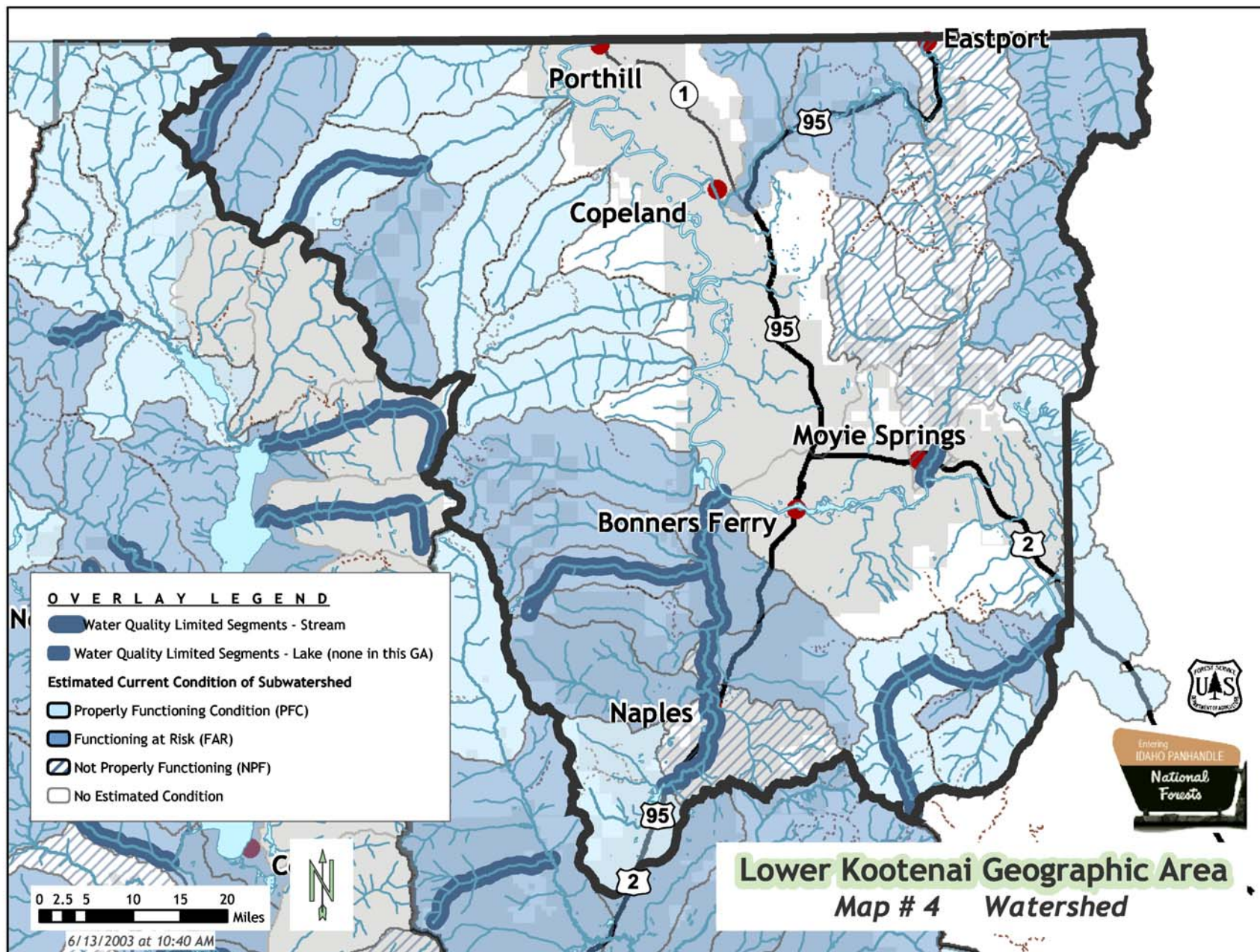
Special Interest Areas

- Timber harvest is not expected.
- No Surface Occupancy stipulation for oil & gas leases.
- New road construction is not expected.
- Prescribed fire may be used for hazard reduction.

Existing and Recommended Wild and Scenic Rivers

In all of the Recommended Wild and Scenic Rivers, management activities will protect the river corridor values so as to not preclude their potential candidacy.

The only existing Wild and Scenic River on the Zone is the St. Joe River on the IPNF. The upper portion of the river is classified as a wild river and is within the proposed Mallard Larkins wilderness area. The middle portion of the St. Joe is classified as a Recreational River.



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| <p style="text-align: center;"><u>Map #4</u> Watershed</p> |
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This map layer includes watershed condition and 303d streams.

Watershed Condition and 303d Streams

All the watersheds on the zone have been evaluated and assigned to one of the following three condition classes:

- Properly Functioning Condition (PFC),
- Functioning At Risk (FAR)
- Not Properly Functioning (NPF).

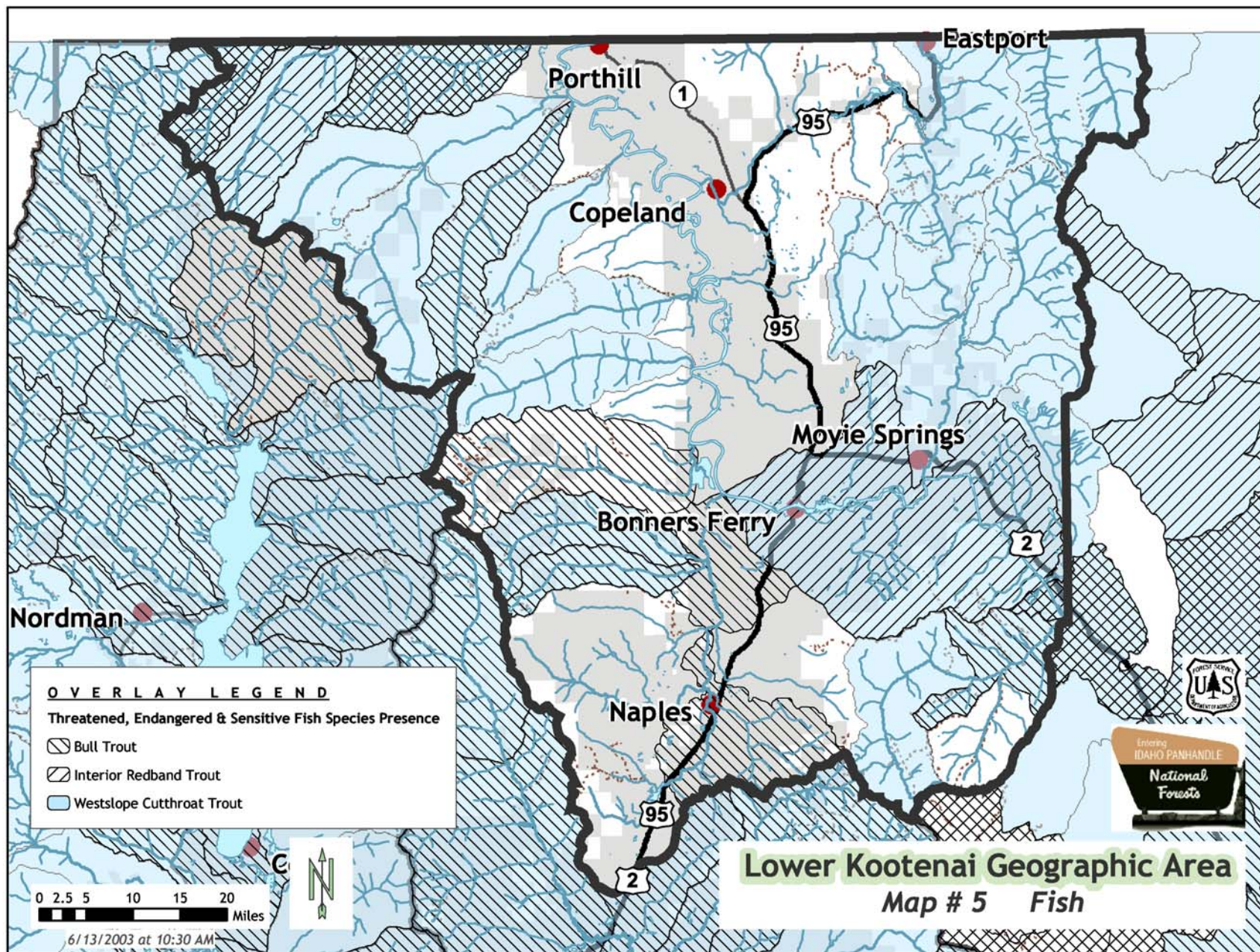
Management strategies for these condition classes may include the following:

- The emphasis will be on maintaining the conditions and water quality of watersheds that are Properly Functioning and are fully supporting beneficial uses.
- The emphasis will be on restoring conditions and water quality in Not Properly Functioning and Functioning At Risk watershed adequately to fully support beneficial uses.

State water quality standards include water quality criteria, designated uses, and anti-degradation strategies designed to provide support for beneficial uses of the water.

Streams and water bodies are identified by the States as water quality limited under section 303(d) of the Clean Water Act. These are streams or water bodies that do not meet State water quality standards. Examples of management considerations for these streams include:

- Facilitate TMDL(total maximum daily loading) implementation plans and schedules with the states.
- Determine which watersheds and streams have the highest priority for restoration. This will be a collaborative process with EPA, state water quality bureaus, U.S. Fish and Wildlife Service, the public and other interested parties.



Map #5

Fish

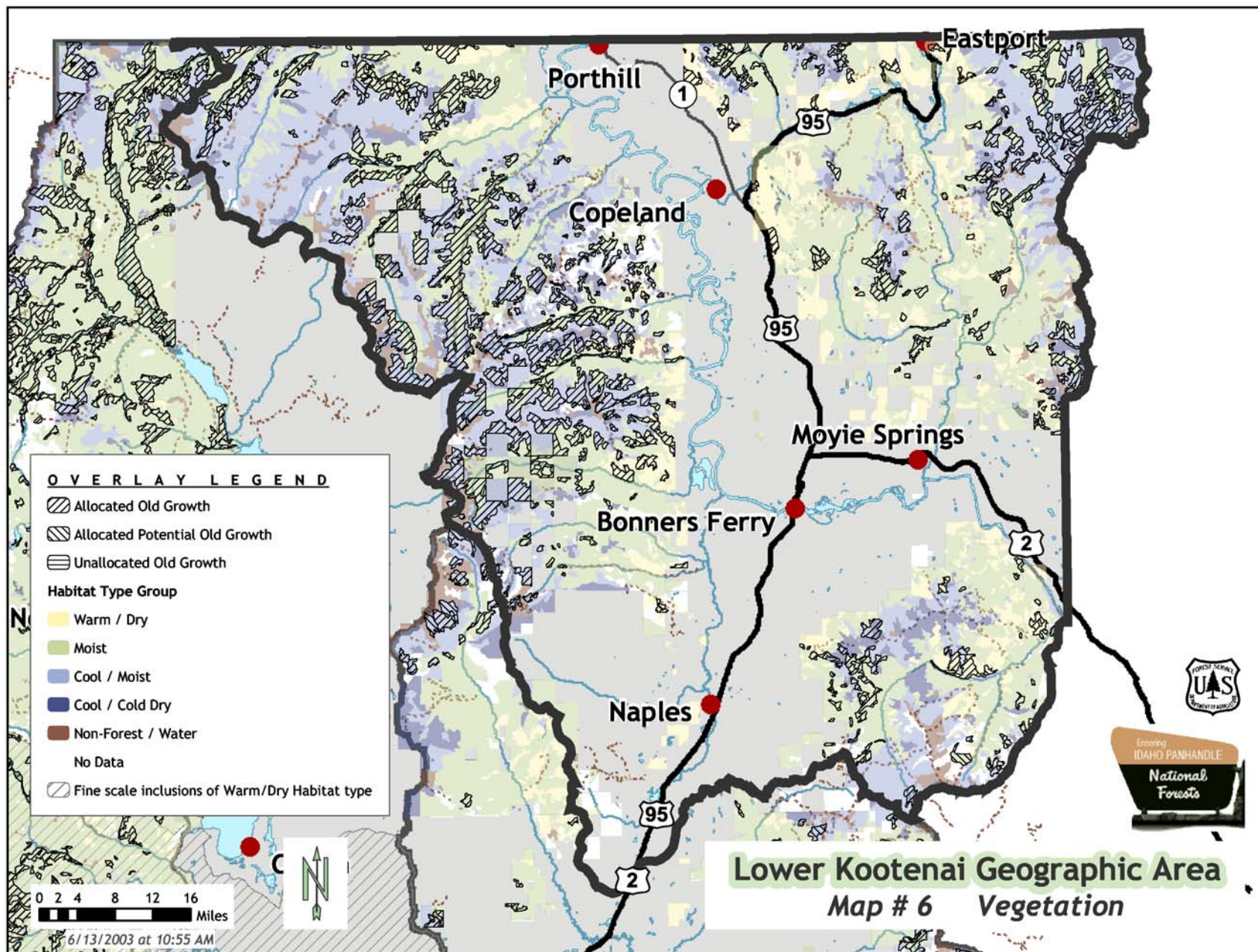
This map layer shows watersheds with populations of threatened, endangered or sensitive fish species.

Threatened, Endangered, and Sensitive Fish

The AMS identified the fish species within KIPZ that were listed as threatened or endangered or that are on the Regional Foresters' Sensitive Species list. Current distribution and population status was provided for bull trout, westslope cutthroat trout, and interior redband trout.

Management considerations for these areas include:

- Provide for recovery of these and other Threatened, Endangered, Proposed Species (TEPS) (e.g., burbot, Kootenai River sturgeon, torrent sculpin, and amphibians to extent possible)
- Avoid degradation: prohibit actions that would put these species at risk.
- Habitat restoration (ties in with physical processes – see watershed)
- Maintain and protect species richness/biological significance.



Map #6 **Vegetation**

This map layer includes information on old growth and habitat type groups. The vegetation map layer is still under development.

Old Growth

Old growth forests are considered as ecosystems that are distinguished by old trees and related structural attributes. They encompass the later stages of stand development that typically differ from earlier stages in characteristics such as tree age, tree size, number of large trees per acre and basal area. Specific attributes vary by forest type.

The need to preserve and maintain stands of old growth forest is based on ecological sustainability, including needs for diversity and wildlife, as well as human values. Management considerations within old growth include:

- Old growth forests should be well distributed across the forest, representing various patch sizes, forest types and sites (i.e. dry, moist, and cold forest sites).
- Much of the former western larch and white pine old growth that occurred on upland sites have converted to cedar/hemlock old growth.
- Where upland sites experience periodic moisture stress, some of the old growth forests composed of drought prone species (cedar/hemlock, Douglas-fir) may not be sustainable in the long term.
- Old growth whitebark pine is in sever decline, due to a combination of factors, including insects, disease and plant succession effects attributable to prolonged fire suppression.

Habitat Type Groups

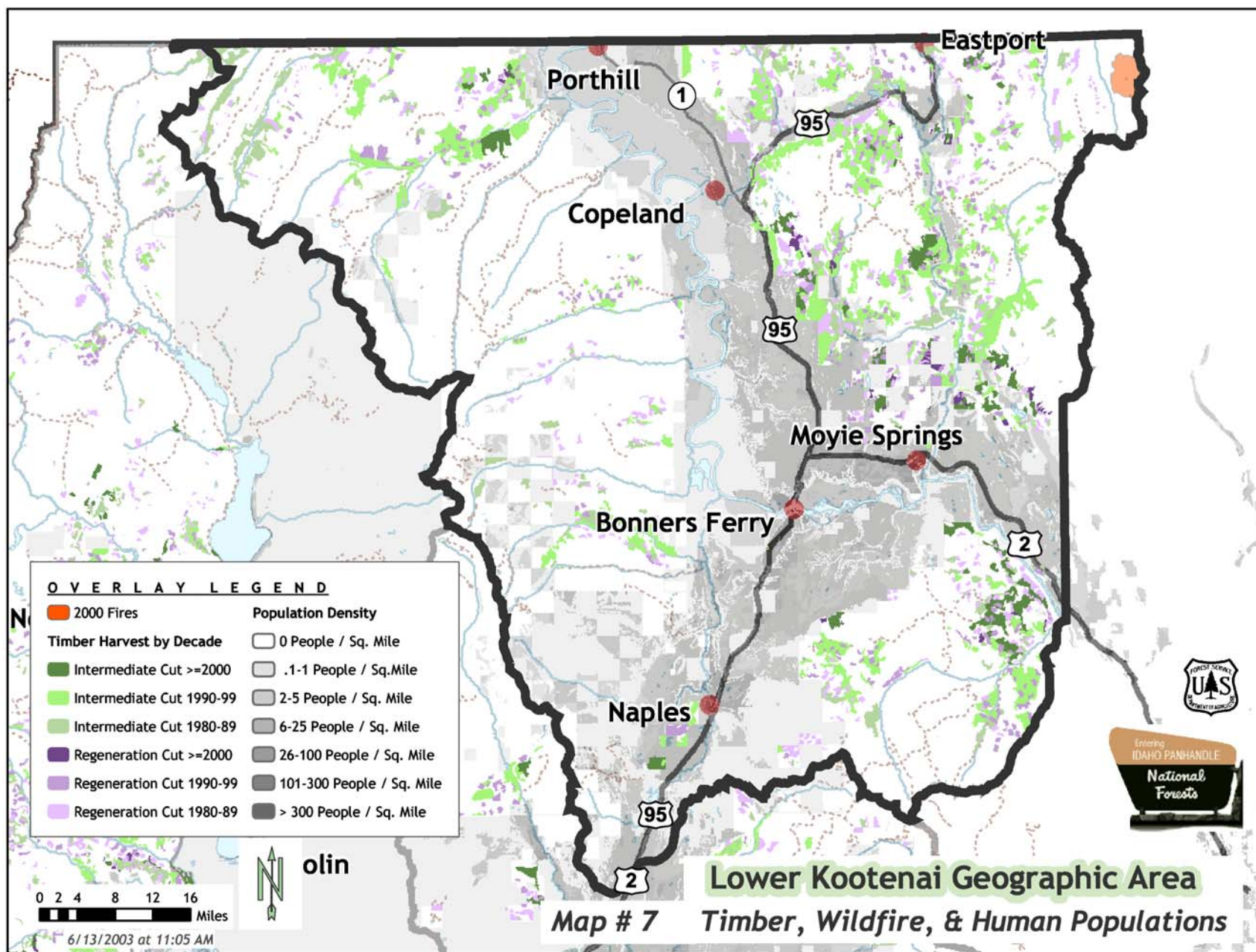
This map displays broad environmental settings that potentially support similar plant communities. Vegetation on the IPNFs has been summarized by Habitat Type Groups (HTGs), which are fairly synonymous with Vegetation Response Units (VRUs) on the KNF. In the following table are the Vegetation Response Units for the KNF and the Habitat Type Groups for the IPNFs:

| Habitat Type Groups | KNF Vegetation Response Units | IPNFs Habitat Type Groups |
|----------------------------|--|--------------------------------------|
| Warm Dry | VRUs 1, 2N, 2S, and 3 | HTGs 1, 2 and 3 |
| Moist | VRUs 4N, 4S, 5N, 5S, and 6 | HTGs 4, 5 and 6 |
| Cool Moist | VRUs 7N, 7S, and 8 | HTGs 7 and 8 |
| Cool/Cold Dry | VRUs 9 and 10 | HTGs 9, 10 and 11 |
| Cold | VRU 11 | |

Combined with existing vegetation maps and other information sources, responses to different types of management scenarios can be predicted and evaluated.

Vegetation Map

Under development...This map will display the existing vegetation using a combination of tree dominance types, size classes and canopy cover categories. This product, combined with other information sources, will be used to analyze resource topics, including timber production, wildfire risk and various wildlife issues.



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| <p style="text-align: center;"><u>Map #7</u> Timber, Wildfire and Human Populations</p> |
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This map layer includes harvest treatment by decade, human population density and wildland fires for the last 10 years.

Harvest Treatment by Decade

The harvest treatment map layer shows regeneration and intermediate harvests since 1980 on National Forest System lands. This is based on the activity information in the TSMRS database as of April 2003.

Regeneration harvests include clearcuts, shelterwood cuts, and selection (group and individual tree) cuts. Intermediate harvests include thinning, sanitation and salvage.

This map indicates where timber harvest has occurred. Past timber harvest will affect potential opportunities for future management.

Human Population Density

This map displays the concentration of people's homes in number of people per square mile. The information helps define the wildland/urban interface and displays potential areas where treatments may help to reduce the risk of wildfire.

Wildland Fires

This map displays predominantly larger, stand replacing fires originating from various sources. Not all fires are depicted on this map. For the KNF, all wildland fires since 1990 are included. In some cases fire polygons will overlap, indicating fires that have re-burned over older fires. For the IPNF, only those fires that occurred in 2000 are included. Smaller fires and underburns are not displayed.

Other Maps Under Development

Tentatively Suitable Timberlands

Under development... This map will display those forested lands that are capable of producing commercial timber products, and:

- Have not been withdrawn from timber harvest by Congress, The Secretary of Agriculture, or the Chief;
- Existing technology and knowledge is available to ensure timber production without irreversible damage to soil productivity, or watershed conditions;
- Existing technology and knowledge, as reflected in current research and experience, provides reasonable assurance that it is possible to restock trees adequately within 5 years after final harvest; and
- Adequate information is available to project responses to timber management activities.

Weed Risk

Under development... This map will illustrate the greatest risk for weed infestation or spread. The map will be developed in part from the delineation of disturbed sites. Disturbed sites will be combined with habitat type groups to identify which areas are susceptible to each weed.

Susceptibility refers to the vulnerability of a native plant community to colonization and establishment of an exotic species. The degree of threat will be used and refers to the degree of change to the structure, composition, or function of a native community from an exotic species. Probability of exposure (POE) will also be calculated.

Fire Risk

Under development... This map will display fire risk, based on condition class and fire regime. Fire risk is related to the habitat type groups, with the drier habitat type groups having a higher fire risk than cooler, moister groups. A component of this map will be the Wildland Urban Interface, which is the line, area, or zone where structures and other human development meet or intermingle with undeveloped wildland. This is normally a two-mile area around all habitation areas, but will vary according to human population density and susceptibility of vegetation to burn.